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ABSTRACT

The theme of the 1990 meeting of the Ministers of Education of the Commonwealth of Nations was improving the quality of basic education. Basic education was defined as "the activities of primary and junior secondary schools, and of programmes of out-of-school education at an equivalent level, both for children and for adults." This preconference briefing presents two papers on curriculum reform. The first paper, "Improving the Quality of Basic Education through Curriculum Development and Reform," by Kazim Bacchus, highlights constraints on the improvement of educational quality, the contribution of curriculum, and strategies for introducing curriculum reform. It argues that any effort to improve quality must begin with a clear definition and prioritization of the goals of basic education. Increased involvement of local communities and teachers in the development of school-based curricula and the preparation of materials are recommended. The second paper, "Improving the Quality of Education: A Case Study of Curriculum Innovation in Malaysia," by A. A. Aziz and others, begins by describing features of Malaysia's new primary and junior secondary curriculum, focusing on implementation processes. Issues surrounding the teaching-learning process, development of materials, teacher preparation, and school management are examined. The article highlights the importance of teacher and community involvement in the change process and describes strategies used in Malaysia to ensure the implementation of a relevant curriculum. These strategies include decentralized management structures, localized production of curriculum materials, and the establishment of community-schools projects. (AC)

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IMPROVING THE QUALITY OF BASIC EDUCATION

Papers commissioned for the Eleventh Conference of Commonwealth Education Ministers

Barbados, 29 October - 2 November 1990

Series Editors: Susie Rodwell and Richard White

Volume I: CURRICULUM REFORM

Kazim Bacchus

A A Aziz, S H Ahmad and F A Bakar with S Rodwell

September 1991

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INTRODUCTION

Every three years the Ministers of Education of the Commonwealth meet to exchange views on matters of common concern and to devise practical programmes of cooperation.

The theme chosen for the 1990 meeting, held in Barbados, was **Improving the Quality of Basic Education.** This topic is now at the forefront of the current international education agenda, and was taken up at other conferences during 1990, particularly the **World Conference on Education for All** (WCEFA) held in Jomtien, Thailand, and the **World Summit on Children** held in New York.

To provide briefings for the conference, the Commonwealth Secretariat commissioned a series of papers on this theme from a number of leading international educationists. The purpose of the papers was to inform the Ministers of Education of how current evidence is challenging as well as confirming accepted beliefs and, through case studies, tell them what is happening in a range of countries and programmes. It was decided that a selection of these papers should be published as a series of three volumes. The series consists of:

Improving the Quality of Basic Education

Volume 1: **Curriculum Reform**
Contributors: M K Bacchus and A A Aziz et al

Volume 2: **Initial Teacher Training**
Contributor: B Avalos

Volume 3: **Quality and Aid**
Contributors: J S Singh and K King

The term basic education is taken to mean the activities of primary and junior secondary schools, and of programmes of out-of-school education at an equivalent level, both for children and for adults. Whilst concern with the quality of basic education is nothing new, what these papers show is that our strategies for maintaining and improving quality at this level must be continually re-assessed with policy-makers, planners and practitioners taking account of the lessons learned. This will mean adapting, or even discarding practices which educationists have for long taken as central to accepted theory and good practice. It also means learning more about how schools work and the extent to which, and how, external factors influence performance.

At the Barbados Conference the Ministers identified a number of areas which could be taken up at both national and international levels to improve quality. In particular they identified the centrality of teachers and agreed that the work of the Commonwealth Secretariat should focus on finding ways of providing more effective teacher training, management and support. The need to find ways of limiting the effects of economic structural adjustment programmes on basic education was also seen as an important area for dialogue.

In this, the first volume of the series, two papers focussing on curriculum reform are presented. The first, by Kazim Bacchus, is a wide ranging discussion of the quality of

education, highlighting constraints on its improvement, the contribution of the curriculum and effective strategies for introducing curriculum reform. In contrast to this more global overview, the second paper, primarily by Arfah Aziz, is a practical case study of curriculum innovation in Malaysia.

The two papers provide interesting and complementary reading. Significantly, both authors adopt a similarly broad definition of the curriculum to encompass the total programme of schooling both formal and informal, and put it at the centre of any effort aimed at improving the quality of basic education. Bacchus sees the concept of quality as multi-dimensional, arguing that any effort to improve it must begin with a clear definition of the goals of basic education. Moreover, given that the various programmes aimed at bringing about improvement are likely to be competing for limited funds, a prioritisation of goals is necessary. Further steps need to be taken to enhance the contribution of the curriculum, through, for example, a greater involvement of local communities and teachers in the development of school-based curricula and the preparation of more relevant materials.

Examples of such strategies are beginning to emerge in developing countries, and the Malaysian case study provides evidence of this. Following a brief description of some of the key features of the new primary and junior secondary curriculum introduced into Malaysian schools in recent years, attention is focussed on the processes of implementation. In particular, the issues surrounding the teaching-learning process, materials development, teacher preparation and school management and administration are examined. In common with Bacchus, Aziz highlights the importance of teacher and community involvement in the change process and describes some of the strategies being adopted in Malaysia to try to help ensure the effective implementation of a more relevant curriculum. These include decentralised management structures, localised production of curriculum materials and the establishment of community-school projects.

Aziz concludes by drawing attention to the complexity of the curriculum implementation process, involving as it does changes in materials, teacher roles and management practices. In the Malaysian case, some of the problems and issues associated with implementation have been addressed, yet others may prove difficult to solve. But acknowledging their existence and working within the prevailing constraints is, as both authors in this volume help bring to our attention, an important step towards ensuring that curriculum innovation contributes towards bringing improvements in the quality of basic education.

Thanks are due to the staff of the Commonwealth Secretariat Education Programme for coordinating the production of these papers, and to Christine Walker for the quality of her typing.

Susie Rodwell **Richard White**

IMPROVING THE QUALITY OF BASIC EDUCATION THROUGH CURRICULUM DEVELOPMENT AND REFORM

Kazim Bacchus

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1.0 THE QUALITY OF EDUCATION AND THE CURRICULUM

1.1 The Quality of Education: A Professional vs a Popular View

There are different views among educators about what constitutes a 'good quality' basic education and what precise steps might be taken to achieve it.[1] This is partly due to the fact that, as was noted at the Commonwealth Secretariat's Consultative Meeting on 'Improving the Quality of Basic Education', the concept is 'multi-dimensional, with a range of definitions and with differing weight given to its various components by different stakeholder groups in the educational process' (Commonwealth Secretariat, 1989:1). However, despite this, the public in general, and parents in particular, often seem to have less doubts about what is implied by the term. For them, improving the 'quality of education' invariably means raising the level of academic performance of pupils, usually as measured in test scores, in the various subjects which form part of their school curriculum.

Unlike many professional educators who perceive the curriculum as an instrument through which a given social reality is constructed or reconstructed (Young, 1971), parents are generally willing to accept the curriculum of schools as 'given', and to be more concerned with what steps can be taken to improve their children's chances of doing well at examinations. This emphasis on examination results as an index of the quality of primary education is particularly marked in situations in which the number of academic secondary school places is limited and competition for such places is based largely on a selection test linked to the course of primary instruction.

The elected political leaders often share the parents' views about what is good quality basic or primary education. But they are also aware of the fact that any qualitative improvement in such education must come, not only from increasing the level of students' academic performance so that they will be better equipped to compete for entry into secondary schools, but also from reforming the nature of the education that they currently receive so that they can be better prepared to earn their livelihood in the changing socio-economic context of their societies. Moreover, they are also concerned with the educational level of the overall population, and raising the quality of education in this context means providing educational facilities for a wider section of it.

Three major thrusts in efforts to improve the quality of basic education can thus be identified. These are:

- raising the academic performance of students in the various subjects offered in schools with the currently available resources. Such efforts are often referred to as attempting to improve the 'internal efficiency' of the schools.

- providing children with education that is most likely to help them improve the quality of their lives when they become adults. This would include developing the skills necessary to meet their essential learning needs for survival, security and growth (Coombs, 1973) This approach is often referred to as attempting to raise the 'external efficiency' or the 'effectiveness' of schools.

- increasing the rate of school enrolment by providing more school places and reducing the inequalities in educational opportunity which currently exist between the sexes and between different regions in a country. For some Commonwealth countries this goal has been translated into the universalisation of primary education.

These thrusts are often in conflict with each other where there are inadequate resources to implement all of them simultaneously. For example, expansion of a country's educational services is likely to affect its efforts to implement curriculum reforms aimed at improving the quality of the education because of the competition for funding. This is partly revealed in the dilemma confronting many Commonwealth countries. Thus in Zimbabwe, in an attempt to extend education for the black population and reduce the existing educational inequalities between them and the whites, the government has increased primary and secondary school enrolments by about 175 per cent and 950 per cent respectively since 1980. But of the 300,000 school leavers who are now expected to join the labour force each year only 10,000 are likely to find jobs in the modern sector and therefore the biggest single challenge now facing education in that country is that of curriculum reform. There is a crucial need 'to prepare students for the reality that the vast majority are not only going to have to live in the rural areas, but that they will also have to be self-employed.' (Morna, 1990). However, such curriculum changes would further increase the educational budget and affect the country's ability to pursue other efforts to raise the quality of its education.

Another dilemma associated with attempts to improve educational quality, arises from the often unquestioned assumption that education which is geared towards increasing the academic performance of students will produce the skills and knowledge that will later help them to improve the quality of their lives as adults. There is little evidence to bear out this assumption, except possibly in the fields of basic literacy and numeracy. While there is a known relationship between length of schooling and income, an increase in the number of years of schooling beyond a certain level does not automatically result in an improvement in the productivity of all types of workers. For example, farmers who have about four to six years of primary schooling seem to do better economically than those without any formal education. But the relationship between years of schooling and improvement in community life, especially in the more depressed areas, seems to be unclear. One researcher working in Sri Lanka pointed out that:

> 'there is little empirical evidence to link formal schooling in disadvantaged areas with ... increased agrarian output, improved health, nutrition and housing, more equitable access to land and water, creation of new employment, or other such indicators. The village school cannot serve as a primary motor for advancement (though) it can - and does, in the effectively functioning schools - serve to enhance the development of individuals, providing them with literacy, numeracy and varied kinds of general knowledge, relevant or less relevant to their daily lives.' (Baker, 1988:314)

This does not mean that good quality basic education cannot have a positive effect on changing traditional attitudes towards health, nutrition, agricultural practices, women's status and other important areas of development, including people's work styles. But it does suggest that education alone is not enough to achieve this goal and that accompanying structural changes in society are also necessary. It also draws attention to the importance of considering very carefully what constitutes 'quality education' and strategies for its improvement. In particular, the need to improve or modify the curriculum which is followed by those who are currently attending schools. However, before exploring the issue of curriculum reform, a brief discussion of the resource constraints mentioned earlier is warranted.

1.2 The Effect of Resource Constraints on Improving Quality of Education

There are many hurdles which countries have to overcome in their efforts to improve the quality of their education. Among these is the limited amount of funds usually available for this purpose. Admittedly, there is not always a direct connection between level of educational funding and the academic output of schools, as judged by examination results. For example, in the United Kingdom the now disbanded Inner London Education Authority was top of the list of local education authorities in England in terms of its per pupil expenditure on education, but almost at the bottom in terms of its examination results. Both the socio-economic background of the pupils and the environment in which they live are important intervening variables between expenditure and quality of education, as measured by examination results.

However, that does not mean that the level of financing available is not an important ingredient in efforts to improve the quality of education. But in most economically less developed countries (ldc's), funds for education are increasingly limited - a problem also faced by many of the richer Commonwealth countries. For example, the GNP per capita in Sub-Saharan Africa and the Caribbean had fallen by between 10-25 per cent during the 1980's while at the same time their debt burdens and their unemployment rates had risen. The rate of their population growth also remains quite high and there has been a substantial rise in their school enrolments over the past three decades. One of the

outcomes of these developments has been a reduction in real terms of their per capita pupil expenditures on education. In the thirty-seven poorest countries, which includes a number of Commonwealth countries this decline has been about 25 per cent during the 1980s. In addition, the per capita cost of providing education for additional pupils has been relatively high because the recent efforts at expanding education have often been directed at reaching children in the more remote areas.

The effect of all this is seen, not only in under-resourced schools most noticeable in the marked reduction of funds available for the supply of educational materials, but also in increasingly overcrowded classrooms. Another outcome of resource constraints is that the rate of educational expansion which occurred in many of these countries over the past fifteen years has started to decline. In the poorest ones it has probably slipped below the rate of population growth, because in order to ensure that increases in enrolment among the 6-11 age group in the ldc's keep pace with population growth, their school enrolments would have to rise by about 75 per cent between the years 1985 and 2000. Such a rate of educational expansion would be impossible for these countries to achieve and would obviously add to their financial burden and interfere with other efforts aimed at improving the quality of education.

1.3 The Meaning of Curriculum

Before beginning to discuss the role which the curriculum and curriculum changes might play in helping to improve the quality of basic education, it would be useful to indicate how the term is used here. Curriculum refers to:-

- the content of the instructional programme, which includes all the learning experiences provided formally and informally by schools;
- the instructional strategies used to achieve stated curriculum goals;
- the instructional materials and facilities available to schools; and
- the methods of evaluation used to assess whether the curriculum goals have been achieved.

This broad definition of curriculum puts it at the centre of any effort to improve the quality of basic education and implies that a coordinated effort in all the areas included above and others such as teacher education, educational administration and supervision is necessary to achieve an overall improvement in education. As suggested by the Commonwealth Secretariat's Consultative team on this topic 'an integrated package of measures' is generally needed to raise the quality of education (Commonwealth Secretariat, 1989:1). A point which was also made about efforts to improve primary education in countries such as Sri Lanka (Peiris 1976). Similarly, the Caribbean Mathematics improvement project noted that changes in goals, in content

and in instructional strategies need to be integrated if learning outcomes are to be improved (Cundy, 1977).

1.4 Enhancing the Contribution of the Curriculum

In order to increase the contribution which the curriculum can make towards improving the quality of basic education it is necessary to be quite clear and realistic about the major goals of such education. Ministries of Education in their efforts to regard the school as the only educational agency in society often include in their curriculum guides a long list of objectives of basic schooling. It might be necessary to establish some order of priority among these goals and identify those which should be the key responsibility of the school system. Such choices are very difficult to make, as for example, when one has to choose between allocating more instructional resources to the teaching of literacy skills as against teaching about the culture of the society. But when resources are limited some difficult choices have to be made.

In these situations, schools must be seen in their proper perspective, that is as one institution within a network of other institutions in the community which are involved in educating the young. With this perception of schools, a few basic questions, such as the following, must be asked by curriculum planners, "What are the most crucial educational goals which can only be achieved by schools and not by other institutions in the society?" and "What other agencies - both formal and non-formal - exist in the society or can be developed outside the formal system of education, to assist with the achievement of other important educational goals, such as the transmission of aspects of the society's culture to the younger generation?"

One key issue which arises is whether primary education should be regarded as a goal in itself, aimed at helping to equip students with the skills, knowledge and dispositions to cope more effectively with life in their communities after they leave school, or whether it should be essentially for preparing students to compete for entry into secondary schools. This has always been a difficult problem for many Commonwealth developing countries to solve. Some educators have argued in favour of the second alternative, suggesting that the kind of academic preparation which is usually required for a secondary education is what primary schools are often best equipped to give. Others prefer the first goal. For example in Tanzania one of the stated intentions of the government was to make the primary school programme self-contained, with the focus being to better equip students for life in their communities and not simply directed at preparing them for an academic secondary education. However, since admission to secondary schools in that country still depends largely on the students' performance at the primary level, most parents continue to assess the quality of primary education in terms of the opportunity it provides for securing entry into secondary schools.

One way to overcome this dilemma would be for students in the ldc's who have received a basic education over a period of about eight to nine years not to be allowed to pursue

secondary education immediately. Instead, they should all be required to enter the world of work, usually in an 'apprenticeship' role, in an attempt to find out the types of jobs for which they are likely to be most suitable (Bacchus, 1981). They would then follow up their basic education with the preparation required for these jobs through some form of planned and supervised practical or on-the-job training or even a combination of part-time work and part-time schooling. After this work experience lasting about one or two years, some might return to secondary school, possibly after taking some evening classes, in order to pursue advanced studies for those occupations which require higher levels of education and training. However, politically such an educational innovation has proved difficult to introduce.

The curriculum implications of deliberations such as the above are significant. If the focus of basic education is to prepare students better to cope with the realities of life in their communities, the curriculum offered might be somewhat broader than if they were being prepared simply to enter secondary schools. This means that the expected performance of these students in some of the more academic subjects, such as mathematics, might not be as 'deep', although it might be wider in scope. In such situations the secondary schools would need to restructure their instructional programmes and be prepared to help students make up these academic 'deficits' before they leave secondary schools. At the same time, full advantage would need to be taken of the broader basic education that the students would have received during the earlier stage of their education. On completion of their secondary school course, students would not only achieve the required levels of performance in their selected subjects to secure admission to higher educational institutions, but also they would have a broader educational background as a result of their primary education.

In Papua New Guinea, for example, an attempt was made to equip students with the skills and competencies which would be useful for village life, while at the same time not reducing their chances of admission to secondary schools. An innovative Secondary School Community Extension Project was introduced which tried to maintain academic standards in the 'core' subjects whilst developing intellectual skills in a village-oriented context by getting students 'involved in a range of practical subjects appropriate to the development needs and resources of the immediate community' (Currin, 1982:108). The experiment seems to have been fairly successful but costly and hence its expansion nationwide was never achieved.

In summary, the suggestion here is that when schools are faced with limited and dwindling resources and, at the same time, are being challenged to enhance the contribution of the curriculum in order to improve the quality of the education which they offer, it might be a useful strategy for them to concentrate their efforts on developing the more essential educational knowledge and skills. There will obviously be other educational tasks remaining and for these, help might be sought from other agencies, groups or individuals in the community. The concern here is that if schools attempt to

assume full responsibility for a very wide range of educational tasks, their efforts to improve or even maintain the quality of the basic education which they are trying to provide will be put in jeopardy.

1.5 Delineating the Tasks of Schools and Other Agencies

It might now be useful to suggest some of the tasks on which the schools, faced with considerable resource limitations, might concentrate and those for which the help of other community agencies, groups or individuals might be solicited.

First, there are certain foundational skills that must be acquired not only because they are necessary in themselves but also because they lay the basic infrastructure for future learning. These include language and mathematical skills and responsibility for these must remain primarily with the schools.

Secondly, there are areas of knowledge which are usually covered in such subjects as science, geography and history, for which it might be difficult to obtain any competent help from the local community. The teaching of these subjects should also remain the responsibility of the schools, especially since through them teachers can further develop their students' critical faculties and thereby inculcate an enquiring attitude to learning in general.

Thirdly there are areas with which various other agencies or organised groups within the community might be able to assist. These would include subjects such as:-

- religious and moral education for which assistance might be sought from the various local religious groups or organisations. Even political education might partly be provided for senior students by the various local political parties.

- health education, with which the district nurse, sanitary inspector, other local health officials and even the qualified staff at child care centres, if these exist, might be able to help.

- agricultural education might be able to draw on the help of extension workers and the more progressive local farmers. Assistance might also be sought from other members of the community to undertake some of the major physical tasks connected with operating a school farm -tasks such as fencing, ploughing, etc. This would leave the teacher to concentrate on the truly educational side of the programme, allowing the school farm, where it exists, to be used mainly as a field laboratory in which students can experiment with new crops or improved ways of cultivating existing crops.

- the arts, such as local music and dance, wood-carving and other practical arts. For these subjects, assistance might be sought from local artists and craftsmen.

Further, pupils might also be encouraged to develop 'circles

of interest' or clubs of an educational nature for which help, including leadership, might be provided by local community members. Boy Scouts, Girl Guides, Young Farmers' Clubs, are all examples of agencies or groups which have traditionally assisted with educational activities in many Commonwealth countries.

Two important points need to be borne in mind if such community efforts to help with educational tasks are to be successful. First, they must be well organised so that they can be time-tabled in a regular manner, like other subjects in the curriculum, even though they might be offered outside of the regular school hours. This would mean that support for the idea would have to be sought and obtained from any Government agencies whose staff might need to be involved in the activities. Secondly, an effort should be made to provide short courses, lasting a day or two, on instructional strategies which might be useful to those community members who are willing to provide some 'instruction' in their area of expertise and knowledge.

It must also be remembered that such community help does not occur by chance and schools might have to play an active role in seeking it, possibly through institutions like parent teachers' associations. Therefore, when an overall assessment is being made of the work of schools, consideration would have to be given, not only to the pupils' levels of achievement in school subjects, but also to the efforts made and success achieved in trying to involve community agencies to help with some aspects of the pupils' education.

The overall aim of the strategy outlined above is to help maximise the use of existing resources to achieve a range of educational goals. If schools had the resources to provide say, twelve to thirteen years of basic schooling with well qualified teachers and an adequate supply of resources, including books, then they might be in a better position to respond more positively to the challenge of improving the quality of the education which they offer through all the subjects in the curriculum. This is what the economically more developed Commonwealth countries are trying to do. They tend to depend primarily on the formal school system to assume responsibilities for an increasing number of educational tasks, trying to provide the schools with the necessary resources including well educated and trained teachers, specialist personnel and books and other instructional materials. Yet, despite this fact, many of these countries, even with their better equipped schools, still face problems in achieving the range of educational goals which they set themselves and are producing large numbers of 'functional illiterates' who do not have the requisite skills to operate effectively in their societies. Hence, even in some of these countries there has been a call for a 'return to the basics' in education, with attention focussed on improving the quality of learning outcomes in some of the basic subject areas while not increasing costs to an unmanageable level. The overall point here is that when limited resources are available for schools it might be necessary to give priority in the use of these resources to

the teaching of key subjects on the curriculum, despite the fact that it might be a better educational strategy to try to improve the performance of students in all subjects, if resources are available. Moreover as the above discussion highlights, other agencies may have a role to play in helping to achieve some tasks.

1.6 Introducing Curriculum Changes to Improve the Quality of Education

Even if the educational goals and the objectives and content of a new curriculum become more focussed and geared toward providing students with the skills, knowledge and dispositions which are most likely to equip them to improve the quality of their lives on leaving school, there are other hurdles which have to be overcome to help ensure success. Particular attention needs to be given to the smooth implementation of curriculum reforms. For example, such changes are likely to involve the replacement of some existing areas of knowledge, no longer deemed relevant or appropriate to the needs of the society, with new subject content. This has happened in many countries where local and regional history replaced British and European history in the school curriculum after independence. However, there may be a certain amount of resistance from various groups interested in maintaining the status quo, as Lillis found for example, among certain educators in Kenya who were opposed to replacing major elements in the English literature syllabus with African Literature (Lillis, 1985). The difficulty which some countries have experienced in trying to replace history and geography with social studies is another case in point.

There are a number of strategies which can be adopted to help overcome resistance to curriculum changes and try to ensure that curriculum reform improves the quality of education, and these are the subject of the second half of this paper.

2.0 INTRODUCING CURRICULUM CHANGE

2.1 The Involvement of Local Communities in School-based Curriculum Development

One of the sources of resistance to curriculum change can be the general public and this might be reduced through attempts to involve community members in the process of curriculum development. It is sometimes felt that parents, especially those in rural areas or those who are illiterate or not well educated cannot make a useful contribution to curriculum development in schools. But educators who have tried to involve parents in a meaningful way in this activity have found that this is not necessarily true. Based on her experiences in Botswana, Kann has suggested that 'all community members are quite capable of sufficiently understanding the complex issues involved (in attempts to improve the quality of education) provided that someone takes the time and trouble necessary to explain them adequately' (Kann, 1989:3). She also draws attention to some of the benefits to be gained from effective dialogue with community members in these efforts. Experiences in Tanzania with

encouraging community participation in curriculum development provide further evidence to support the view that parents and community leaders can make a significant contribution in this area (Kilihimana, 1975). This applies particularly in situations where the major goal of basic education is seen as preparing students for life and work in their communities, rather than simply for entry into secondary schools.

A further point is that in some communities there can often be conflict between home and school, or a lack of reinforcement by the home of what is taught in schools. This is particularly noticeable in the fields of health and nutrition, agriculture and home economics. The involvement of parents in curriculum development efforts can therefore help to reduce these conflicts and provide support for the work of the schools in these areas. Such cooperation can also facilitate the production of a more integrated curriculum, which brings together the 'school knowledge' provided in the various subjects, while at the same time taking cognizance of the 'common sense knowledge' shared by the community.

For example, in one rural school in Tanzania members of the community, the teachers and the senior students were actively involved in curriculum development activities. As a result current concerns of the villagers were brought into the school and helped to form the basis of some of the lessons or projects in which students were involved. So, a mosquito problem, which the villagers faced, became a topic of study by the pupils and resulted not only in formal instruction on such matters as the life-cycle of the mosquito and its breeding habits, but also in a joint school/community effort at mosquito control and eradication. In another situation, the population was suffering from protein deficiency and the agricultural authorities tried to introduce the local cultivation of the soya-bean, the consumption of which would have corrected this problem. But, despite the expert advice and help that was to be offered by the extension workers, many small local farmers, with limited amounts of land, were rather hesitant to shift from the cultivation of their traditional crops to soya. This matter was brought up at the local parent-teacher association meeting and it was decided that, with the assistance of some local farmers, an experiment with the new crop would first be tried out on the school farm. This would allow the farmers to build up some local knowledge and experience with the new crop without threatening their meagre but traditional sources of livelihood. In both these cases the curriculum activities undertaken by the school were of direct interest to the pupils and, as a result, their learning experiences were enhanced in such fields as health, science, agriculture and even elementary mathematics, especially since they had to work out the cost of producing the new crop.

On the other hand, a new home economics programme for senior girls was introduced in schools in Swaziland and no attempt was made to involve members of the community. When an evaluation was done, it was found that while the students who took the course were quite knowledgeable about the scientific basis of their subject and did well at their examinations,

this new knowledge had little impact on the type of dishes provided at their homes or on how these were prepared. This was partly because the mothers, who were the key decision makers in the preparation of meals for their families, were entirely left out of this curriculum reform effort.

In summary, when efforts at curriculum development are carried out in cooperation with the key members of the community, the outcome can be to help alleviate potential resistance to curriculum changes by increasing the perceived relevance by the parents and the pupils of the education which the schools are providing. This can help raise the level of academic achievement among pupils, lower significantly the rates of grade repetition and generally result in an overall improvement in the quality of their education.

2.2 Greater Involvement of Teachers

Teachers play a crucial role in influencing students' learning outcomes and hence in raising the quality of their education. However, one of the major challenges facing the curriculum developer is the fact that primary school teachers in most ldc's, including those in the Commonwealth, tend to have a very limited educational background, with many lacking formal training for their jobs. The academic deficiency is often very noticeable in the teachers' level of linguistic competence which seems to be of key importance in any effort to improve the quality of education offered in schools.

In addition, in comparison with other occupational groups, teachers are not usually well paid and partly as a result of this, they are not highly motivated individuals. This fact, coupled with working in overcrowded schools, which often do not provide enough seating and writing space for all the pupils in attendance, not to mention the paucity or even absence of books and other educational materials, makes teaching in these countries a very challenging and difficult job. Added to this is the poor manner in which teachers, particularly those at the primary level, are often treated. Thus low salaries are not the only, and sometimes, not even the main factor contributing to teacher dissatisfaction with their jobs. But often, little attention is paid to these other sources of grievance, which could be overcome by some imaginative action at no or little additional cost.

For example, in some countries, new teachers do not receive notification of their appointments until a few days before and sometimes weeks after the school term has started. Little or no attention is paid to some of their crucial needs, such as housing in the more remote areas of the country to which they might be assigned; other Government employees are often treated more favourably in these matters. Salaries, though low, are sometimes irregularly paid, letters written by teachers are often ignored and sometimes they are treated in a rather autocratic manner by bureaucrats in the Ministries or Departments of Education. Such practices are not very conducive to their building up a sense of commitment to their jobs. In many of these countries therefore, more attention needs to be directed towards developing better

personnel policies for teachers. This might help to reduce their increasing sense of frustration with their jobs and prepare them to cooperate more actively in curriculum development efforts.

Further, the generally low levels of education among teachers in many developing Commonwealth countries calls not only for a more focussed curriculum which would allow the range of instructional responsibilities assigned to schools to be better carried out, but also for a more active involvement of teachers to help ensure that curriculum changes are successfully implemented. Such involvement could be achieved through a number of different approaches. The first is the increased participation of teachers in in-service training activities, both through their attendance at courses and their involvement in helping to plan the content of these courses to meet their own needs and address their own concerns. The evidence suggests that if the skills and knowledge of practising teachers are constantly upgraded, the outcome can be a considerable improvement in the quality of the education offered in schools with relatively minimal cost increases.

In pre-service training programmes there is frequently a need for teacher educators to attempt to build up stronger links between the work carried out in the teachers' colleges and in the schools. This would enable teacher trainees to develop a greater awareness of, and more active involvement in, what is going on in schools while they are being prepared for their teaching roles - often the set period for teaching practice does not achieve this objective. In addition, in countries where trained teachers make up only a small percentage of the instructional staff in schools, it might be appropriate for such training to include the development of skills which would enable they themselves to play a more active role in the in-service education of the untrained teachers.

There is ample evidence of the important contribution of training. For example, an assessment of efforts made to improve primary education in Northern Pakistan found that the quality of work offered in the schools can be improved 'through the practical training of unqualified teachers and through refresher training to improve classroom teaching' (Bude, 1990). Some teachers were willing to experiment with changes such as shifting from a teaching style which was characterised by teacher-dominated activities to a more child-centred learning approach, thereby increasing the effectiveness of their work (Heneveld and Hassan, 1989).

In addition to training, certain structural changes in the organisation of schools and the setting up of a system of support for teachers willing to try out new methods, were found to be needed, if these changes were to be sustained. For example, provision had to be made for classroom teachers to be engaged cooperatively in helping to plan changes which were being contemplated at the school level. In other words, if changes were to be effectively carried out, teachers could not just be told by some authority figure what was expected of them, even where the necessary training to help them implement such changes was to be provided. Instead,

opportunities had first to exist for them to be involved in the development of these new approaches. Also, where teachers feel themselves to be part of the whole process of curriculum reform, they are more likely to attend in-service courses aimed at improving their competence to implement the proposed changes.

A few further points can be made concerning the importance of teacher involvement to help promote success in the introduction of educational changes. Teachers need a degree of autonomy to try out new ideas and the support of their colleagues in the process. The quality of supervision provided is often a key factor in helping to raise the quality of instruction provided in the schools and this may need improving. In fact success in introducing new curriculum ideas can depend on a supportive supervisory staff. In many Commonwealth countries this could mean developing a new conception of educational management and supervision among headteachers and education officers - one which focusses on providing professional support and guidance to teachers rather than on the traditional role of the school inspector. There is therefore a need for supervisors or inspectors to be trained in methods of supervision and ways of stimulating and managing change. Trained educational supervisors should be better able to communicate information about any novel approaches being tried out in some schools, to other teachers in the system, so that they too can capitalize on good and tested ideas. The fact that the new approaches have proved successful in other local schools which face similar conditions might increase the willingness of such teachers to try them out.

2.3 The Production of Relevant Instructional Materials

Another strategy which can help teachers to achieve the stated curriculum goals is the production, provision and use of relevant instructional materials. As indicated earlier, one of the conspicuous outcomes of the expansion of educational systems in ldc's including those in the Commonwealth, has been a decline in real terms in per capita pupil expenditure. This is particularly noticeable in the marked reduction of funds available for the supply of educational materials. Yet the evidence is clear, as the World Bank Report on education in Africa noted, that such materials can be the single most important and cost effective input for improving the quality of education which schools offer (World Bank, 1988). And, as Farrell and Heyneman report, 'among nineteen recent assessments of the relation between the availability of printed material and student outcomes in developing countries, sixteen reported a positive relation' (Farrell and Heyneman, 1989:5). Interestingly, the influence of textbooks appears to be stronger within rural schools and among students from lower income families (Fuller, 1985).

This points to the need for an improved supply of low cost materials which are relevant to the students' needs and experiences. Relevance here refers to materials which draw from the children's experiential background thereby enhancing their usefulness and improving the quality of the instruction

and hence the learning outcomes among students. Some schools have even produced their own reading materials based on the work done by their pupils and this has proved very valuable to other students, especially in situations in which books are scarce. Special consideration must also be given to the problem of the language used for instructional purposes and in educational materials. Most evidence has suggested that children learn best, especially in their early years at school, if the medium of instruction is the one with which they are most familiar. This is particularly important among pupils in the rural areas. It is therefore necessary that the materials for these younger children should be prepared in the local language, rather than in one which is foreign to them, even though the latter might be officially the national language. This can be a somewhat costly undertaking, at least initially, but the returns in higher primary school completion rates and lower repeater rates are likely to be substantial. However, in countries like Papua New Guinea or Nigeria where there is a high degree of linguistic heterogeneity, it might be difficult to produce materials in every local language, especially in cases where such languages might not yet have been codified or when there are only a limited number of individuals speaking them.

Further, it cannot be assumed that the experiential background of all the children in any country is the same, and therefore if a national curriculum is being developed it should have some flexibility and encourage teachers to make supplementary and/or substitutive inputs to reflect regional or local communities realities and hence ensure more relevance to the pupils' interests and needs. Such a process would require that teachers have the necessary skills to both develop materials and assess their suitability and appropriateness for children at different grade levels. Schools must also be provided with some basic supplies which would make it possible for teachers to produce local materials for their schools.

Other factors that can have implications for the development of instructional materials are the large classes and rising student/teacher ratios with which teachers in the poorer Commonwealth countries are faced, and the high drop out rates which prevail. Thus, in some cases the pupil/teacher ratio has reached a point where teaching loads have become very excessive. In addition many rural schools experience high rates of absenteeism because pupils are kept home, especially during harvesting time, to help their parents on the farm. This can result in a substantial number of students falling behind others in their classes, especially in such subjects as reading and mathematics, with little or no chance of 'catching up'. An outcome of this is often a high rate of drop out among these pupils. If they are to be helped, Ministries of Education might want to encourage and support the development of self-instructional materials or learning modules which these students, working on their own, might use in an effort to make up the lessons they have missed and thereby keep up with the remainder of the class. This might also help to reduce drop out rates.

2.4 Other Strategies

There are a number of other strategies that might be used by teachers in their efforts to improve the efficiency of their schools in delivering the curriculum and hence the quality of education offered. Among these is one based on the recognition that students can effectively learn from each other, both in and out of school and which therefore aims at promoting such learning. For example, some studies of mixed-ability teaching in Europe suggest that brighter pupils in comprehensive schools do as well as counterparts who are 'creamed off' and sent to more academic institutions, while those of lesser abilities do better than if attending the equivalent of 'secondary modern' schools. The fact that there is more learning exchange taking place between students of varying abilities partly contributes to the improved academic performance observed among some students.

Teachers should therefore attempt to organize their classes to allow their students to work together and help each other - an arrangement which can also be particularly valuable in situations where there are very large classes. They can assign the students into various mixed-ability groups to work cooperatively on particular projects. This process will also free up some of the teachers' time to help those students experiencing particular learning difficulties. In addition, students who are very competent in certain subject areas can often help weaker members of the class in the fields of study in which they excel, thereby helping to increase their own understanding of the subject and skills while helping their peers. For example, students who are particularly fluent at reading and comprehension might occasionally be asked to read a story to one section of a class, or listen to one group reading aloud, while the teacher gives attention to other students in greater need of individualised help. One outstanding example of such an approach to learning in the field of health can be found in the Child-to-Child project which is currently being carried out in a number of countries and coordinated by a committee in London (Hawes, 1988).

Another suggestion is that when new curriculum materials are prepared they should be accompanied by teachers' guides. These should clearly indicate the scope of the curriculum and the sequence in which new concepts are to be introduced and generally provide concrete suggestions on lesson plans and instructional approaches. Such guides should take into consideration the limited supplies of materials that are often available to teachers in poorer Commonwealth countries and should encourage teachers to improvise by using materials which might be available in particular regions of a country. This suggestion is made in recognition of the fact that in many Commonwealth developing countries, teachers often have limited academic and professional training and such detailed curriculum guides could be very useful to them. However, they should not be a substitute for efforts to improve, through in-service training, the competence of these teachers. Finally, these guides should not be prescriptive and should clearly allow the more innovative teachers to try

out different ideas and their own approaches.

Distance education is one of the delivery strategies which has recently become very popular in many of those countries which are trying to extend their efforts at providing education, especially to their more inaccessible regions. The Commonwealth has recognised the importance of this method of delivering education by the recent establishment of the 'Commonwealth of Learning'. There are a number of means by which education can be delivered from a distance although the costs involved are often beyond the resources of many poorer Commonwealth countries. However, experience in many Latin American and some Middle Eastern countries has shown that delivery of education by radio can be an effective means of improving the quality of instruction and increasing the range of coverage of the educational services provided. Moreover, evidence also indicates that it is often the most cost effective delivery mechanism and can result in significant learning gains among students (Hallak, 1990).

When the curriculum is being delivered by means of distance education, the effectiveness of such efforts is likely to be considerably increased if teachers are given the necessary guidance and in-service training so that they can use these programmes more fully and reinforce them with other educational activities. If distance delivery of education is itself being used as part of the general in-service training of teachers it can be supported by week-end or occasional group sessions to supplement the instruction which is normally provided by this means of delivery. One of the arguments for this is that an important function of in-service education is to bring about changes in the instructional strategies used by teachers and in some cases even their attitudes to education. Evidence indicates that such changes are best brought about when there is collective peer-group support for them, and hence opportunities for group discussions can help to promote the success of such in-service courses.

Finally, if the quality of basic education is partly to be judged by the contribution it makes towards helping people improve the quality of their lives, especially the lives of the poorer and more marginalised groups in society, then education must also become an instrument for their empowerment and eventual liberation. Few educators would disagree with this more long term goal of education. But, in order for it to be achieved, those who have attended school should not only have a more accurate perception of reality but also recognise that they have a central role to play in helping to bring about those changes in society which are likely to improve the quality of their lives. Education can begin to contribute to this process of empowerment by helping students to redefine reality from their own experiences and by teaching them how they might acquire greater control of the social, economic and political forces that help to shape their destinies. They are thereby better prepared to play a more active role in trying to determine their own life chances.

An education for emancipation would rest both on the content

of the curriculum and in the teaching methodology used. Thus schools may be disparaging of the culture of the local population regarding it as inferior. This can limit the possibility of students developing a more insightful understanding of themselves and their own reality and could therefore reduce the emancipatory possibilities of their education. Teachers must therefore abandon the traditional 'banking' concept of knowledge and introduce more innovative instructional strategies. The new approaches should involve students in questioning the basic assumptions and precepts of their societies rather than taking them as given. The overall aim of the teacher should be to develop what is referred to as a more 'active pedagogy' which takes the knowledge, the experiences, the understandings, the needs, the expectations, and the problems of the students as the point of commencement of their education. The approach should also foster a deeper understanding of the dominant culture since this would better prepare students to help transform it so as to better serve the interests of the population at large.

It is only when education helps people to change their traditionally passive view of reality and gives them a feeling that they have an important role to play in the change process, that they will be able to make maximum use of the skills and knowledge they have acquired in school to improve the quality of their own lives. This, after all, is the ultimate aim of raising the quality of basic education.

3.0 SUMMARY

The more comprehensive definition of curriculum used in this paper puts it at the centre of any effort aimed at improving the quality of basic education. First it must be noted that the concept of 'quality' as applied to education is a multi-dimensional one and any effort to improve the 'quality of education' must begin with a clear definition of the intended goals of the basic education which is to be provided by the educational system. This would make it possible for the resources available to education to be directed more specifically to the achievement of these stated goals.

It must also be recognised that schools are only one part of the network of agencies available in a community for the education of the young and in view of the limited and declining resources that are being made available to education in many developing Commonwealth countries, the educational tasks assigned to schools should be those which they are best equipped to carry out. The assistance of other community agencies which also perform educational tasks should be sought in an attempt to supplement the educational activities of the schools.

There are many different ways by which curriculum changes aimed at improving the quality of basic education might be introduced and more successfully implemented. Crucial among these is the need for the more active involvement of local communities and teachers in the development of a school-based curriculum to help ensure that it be more responsive to the

needs of children in different areas of a country. In addition, there is need for the production of more relevant instructional materials including more detailed teacher guides and self-instructional modules, the greater use of child-to-child learning possibilities, the development and use of distance education delivery techniques, especially through the radio, the improvement in the quality of supervision and the adoption of more innovative teaching strategies. Particular attention needs to be given to the provision of a curriculum likely to help empower the poor to play a more active role in improving the quality of their lives.

Finally, despite the possible contribution of education in general, and a more relevant curriculum in particular, to the social transformation of societies it must be remembered that education can only play a supporting role in such efforts. Prior to, or accompanying these developments there must be changes in the social, economic and political structures of many of these societies if education and curriculum changes are to make a more lasting contribution to the achievement of greater social equality and an improvement of the lives of their poor and marginalised groups.

Note

[1] The period of instruction considered necessary to provide 'basic education' varies in different societies. In economically more developed countries about twelve years of schooling is increasingly considered necessary to provide 'basic education' for the population while in the developing countries the period is usually between six to eight years. The important point is that it is the level of education considered necessary to allow individuals to function effectively in their societies. In the developing countries the concept of 'basic education' is often used interchangeably with 'primary' or 'elementary' education.

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IMPROVING THE QUALITY OF EDUCATION : A CASE STUDY OF CURRICULUM INNOVATION IN MALAYSIA

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1.0 INTRODUCTION

The quality of education is a concern for all developing countries, and the range of strategies adopted to help bring about improvement include curriculum innovation, teacher training, and more effective management. This paper focusses on the first of these strategies, presenting a case study of curriculum innovation in Malaysia.

Before describing and discussing the introduction and implementation of a new primary and secondary school curriculum in Malaysia, it will be helpful to examine briefly the nature of curriculum innovation and identify some key concepts and issues surrounding the process. However, no attempt will be made to review the extensive literature on the topic, nor to analyse the case study material in relation to current theoretical debates. Rather, it is hoped that the case study will speak for itself and, alongside the growing numbers of case studies of educational innovation in developing countries (eg Lewin K and Stewart J, 1991), will help improve our understanding of the actual processes involved.

The term curriculum is used here to refer to the total programme planned and given to the child within the formal and informal setting of the school. As such, it includes the teaching-learning strategies used to achieve curriculum objectives, pupil-teacher materials and evaluation methods. Innovation is considered to be any deliberate and planned attempt to bring about improvement. Curriculum innovation can thus be viewed as a starting point for major changes in an educational system, and such reforms will also bring about changes in other related areas, including materials development, teacher preparation and the mechanics of school management. However its greatest significance is for the teacher, since curriculum innovation clearly implies that some change is introduced into the teaching-learning process in the classroom.

The introduction of a new curriculum programme has two main stages namely the initiation and development of the curriculum and its implementation. Subsequent to this, is the institutionalisation of the new curriculum - the third main stage of the innovation process. Each of these stages is important, but it is during implementation that most difficulties are likely to occur and thus an improved understanding of what is actually involved in successfully implementing curriculum innovations in the classroom is crucial.

The implementation process has been widely studied, and in an early review of research, Fullan and Pomfret (1977), considered that the implementation stage is not simply an extension of innovation planning but is a phenomenon in its own right. They suggested that there are at least five dimensions in the actual implementation of an innovative idea or development, namely - changes in materials, structure, role/behaviour, knowledge and understanding, and value internalisation. Often, greatest attention is given to the

first, the curriculum materials, however all dimensions need to be carefully considered and of particular significance are the changes required of teachers. Indeed one of the main reasons why implementation can be less than totally successful according to Fullan and Pomfret is:

> 'that curriculum change usually necessitates certain organisational changes in the roles and role relationships of those organisational members most directly involved in putting the innovation into practice... . Often the organisational (role relationship) change aspects of curriculum projects are left implicit in the plans' (Fullan and Pomfret, 1977:337).

More recently, Fullan (1986) has suggested that research on curriculum implementation falls into three phases. The first, as evidenced in his earlier review, documented implementation failure. The second, roughly 1979-86, attempted to identify factors contributing towards success. Most recently, the focus has shifted towards trying to understand how to manage change in schools. Thus in order to plan effectively for curriculum change, attention needs to be given not only to the characteristics of the innovation itself, but also to the teachers who are involved and affected, and the particular setting into which the innovation is to be introduced.

The case study presented here, draws on the writers direct involvement with the development and implementation of new curriculum programmes in Malaysia and some access to locally available documentation. The presentation and discussion is influenced by Fullan's conceptualisation of the key dimensions of implementation and his subsequent examination of the management of change. Thus, in describing and analysing the curriculum innovation process, particular attention is given to the characteristic features of teaching and learning before introduction of the innovations, and the implications for teaching-learning strategies of the new curricula. The materials development procedures are considered, together with the implementation strategies adopted, including teacher training programmes and the introduction of new management structures.

The case study concludes with a brief presentation of some significant findings and recommendations. It is evident that the nature of the curriculum implementation process is certainly complex and as yet not fully understood. Case studies, such as this, seek to improve our understanding of the process and thereby enable curriculum innovation as a strategy for improving the quality of education to be more effective in the future.

2.0 A CASE STUDY OF CURRICULUM INNOVATION - OVERVIEW

2.1 The Origins of the Innovation

The descriptive case study that follows examines large scale curriculum innovation in Malaysia, specifically the New

Primary School Curriculum (NPSC) and the Integrated Secondary School Curriculum (ISSC) - particularly the former. These innovations were recommended in 1979 by the report of the Cabinet Committee set up to review the implementation of the Education Policy.

The report made a total of 173 recommendations, many of which touched on curriculum improvements at the primary and secondary levels of education. Thus it directed that education at both the primary and secondary levels be general, emphasising the individual's total development and reaching a balance between citizenship and national unity as based on the national philosophy 'RUKUNEGARA'. The process of education should be implemented through a relevant education programme involving active student participation in the classroom. More specifically, the report recommended that for primary education, steps be taken by the Ministry of Education to ensure that education emphasised the 3R's, reading, writing and arithmetic.

2.2 The Curriculum Innovations

The new curricula for the primary and lower secondary levels were introduced in order to raise the quality of education. Significantly, before the advent of the curriculum innovations, classroom practices although varying from school to school, generally involved teacher-centred methods, overly dependent on the textbook. Learning was rarely related to the experiences and day-to-day life of students. Those teaching and learning materials which were available, were limited to the syllabuses for each subject, guidebooks or resource books for a few selected subjects, textbooks for most subjects and radio and TV programmes for certain areas. All of these materials were centrally produced.

In contrast, the key features of the two curriculum programmes are:-

- The school is viewed as a total learning environment incorporating classroom and co-curricular activities and spilling into community-based activities.
- Knowledge acquisition is integrated with values inculcation and skills development.
- Language development cuts across the boundaries of all subjects and activities.
- Intellectual development is emphasized through all subjects and activities.
- Teaching techniques should be child-centred, with active participation and involvement of all children. Students should be encouraged to develop an enquiring mind as preparation for life-long education.
- Evaluation should be formative, and classroom-based. As far as possible, profiles of children should be maintained in individual records.

The curriculum programmes have the following additional characteristics:

2.2.1 The Primary Curriculum (NPSC)

- In the first three years of primary education, the emphasis is on reading, writing and arithmetic and the National Language is the medium of instruction. Teaching of a second language is delayed to the second half of the first year of schooling.
- The direct teaching of content is delayed to the fourth year of school.
- Additional subjects for personal development of the child include: Music Education, Physical Education, Art Education. Moral Education and Islamic Religious Education are given to all children.
- Programmes for enrichment and remediation should be provided for all children.

2.2.2 The Secondary Curriculum (ISSC)

- For ISSC, a number of subjects are identified as the core curriculum which is compulsary for all students, to ensure a balanced overall development of the individual's potential.
- The need to have electives is recognised, and these are offered at the upper secondary level, to provide for specialisation that is needed to pursue higher education and/or training, as well as to cater for the individual's interests.
- An integrated subject known as 'Living Skills' incorporating the basic elements of pre-vocational education is offered to all children at the lower secondary level.
- Co-curricular components form an integral part of the total curriculum.
- The curriculum content in almost all subjects has been reduced to give time to enable teachers and students to be innovative, creative, and promote the enjoyment of learning.
- Several social problems and issues such as national unity, drug abuse, consumerism, and pollution have been infused and integrated into the formal and non-formal curriculum.

2.3 The Overall Curriculum Implementation Strategy

The Curriculum Development Centre, a division in the Ministry of Education, was given responsibility for developing and implementing both primary and secondary curriculum projects, thus helping to ensure and maintain continuity between the two curricula programmes. The primary project (NPSC) was

formally launched in December 1980, with limited implementation in 305 schools in 1982, for nationwide implementation in January 1983. It has now been implemented through a full cycle, and is under review.

The secondary project (ISSC) was developed following the primary programme, with limited implementation in 1988 for four subjects (Bahasa Malaysia, English Language, Chinese Language and Tamil Language). In 1989, the total curriculum programme was implemented nationwide in Form 1, and the whole secondary level will be covered by 1993.

2.4 The Implementation Situation in 1990

A quick survey of the status of NPSC in the school system shows a mixed situation. In some schools, NPSC is well implemented, pupils are actively learning, and teachers are developing and utilising a variety of instructional materials. In some other schools, teachers are said to be reverting to the old ways of teaching, increasingly depending on textbooks. Children are back to sitting in rows facing the blackboard, and no group teaching strategies are used.

ISSC is having its share of teething problems. The introduction of 'Living Skills' and renewed emphasis on co-curricular activities have increased the number of hours students and teachers spend in school. Another major problem is classroom space for the additional subjects and activities. This situation is most apparent in urban areas where many schools have double sessions.

In sum, the quality of both curriculum programmes, in terms of aims, objectives, structure, content, teaching-learning strategies and teacher-pupil materials appear to have been maintained, and both programmes are accepted by professionals, teachers, parents and the community. However, the sustainability of the changes over time remains a difficult issue.

The experiences of NPSC thus far, reflect the complexity of the implementation process noted in the introduction. Clearly curriculum innovations such as NPSC and ISSC involve changes in a number of inter-related areas, and the wider implications of such changes need to be carefully considered. For example, the teaching strategies embodied in the NPSC necessitate smaller classes and additional classroom space, which implies a need to review school resource management. Individual pupil differences suggest the need for alternative forms and sets of pupil materials. Curriculum changes require that attention be given to teacher updating and improvement.

3.0 CURRICULUM IMPLEMENTATION - AN ANALYSIS

In order to throw further light on the major dimensions of curriculum implementation, the Malaysian experiences will be examined, noting the key characteristics of the innovations, the implications for practice and the problems encountered in implementation. The presentation and discussion will focus

on four main areas:

Teaching-Learning Strategies
Materials Development
Teacher Preparation
School Management and Administration

3.1 Teaching-Learning Strategies

3.1.1 Key characteristics

The key features of the new curricula were noted earlier, but some further elaboration is warranted.

The teaching and learning strategy for both the primary and secondary levels are focussed on the student with emphasis on the following:

- Students are to be given the opportunity to develop their interest in learning and their love for knowledge, to be prepared to receive subsequent learning, to acquire learning skills and good learning habits, and to be able to learn on their own.

- Students are encouraged to express feelings and ideas through various media such as speech, art, music, and acting, in each of which their creativity is nurtured.

- Students acquire skills, knowledge and values through direct experience, such experiences are to be achieved through their active involvement in interesting activities.

- Students are to be provided with the opportunity to acquire real-life experiences such as problem-solving and developing understanding and cooperation with their peers and other members of society.

- More attention is to be given to the individual needs of the students through remedial and enrichment activities. For those who have not mastered a particular skill within the specified time, remedial activities are to be provided.

- Student evaluation is to be viewed as an integral part of the teaching and learning process.

3.1.2 Implications for practice

The above emphasis has implications for lesson planning, teaching methods and materials, student grouping, classroom organisation and student evaluation. These considerations are applicable to both the primary and lower secondary levels, but the degree of emphasis may differ, according to the level of development of the students.

- **Lesson planning and organisation** In the teaching of basic skills at the primary level, particularly reading and writing, the teacher is expected to use knowledge

from the other subjects. The knowledge selected has to be appropriate to the students' experience and interest. Teachers are also urged to integrate the teaching of a number of skills in a particular lesson, as hitherto skills have often been taught separately.

For the lower secondary level, the integration strategy is further emphasised and operationalised through linking theory and practice and drawing on both direct experiences in the classroom, and those from outside of the classroom and daily life. Such integration provides what might be considered a total experience in order to ensure that learning is meaningful.

- **Teaching methods and materials** Teachers are expected to provide a number of activities in a particular lesson as this would make learning more enjoyable and stimulate students' motivation to learn. Such activities can include discussion, project work, games and simulations, acting or role play, visits and field work. Most of these would provide students with the opportunity to interact with each other and with the environment, and hence, would enhance their awareness and understanding of other people and the environment. In carrying out these activities the teacher is urged to use a variety of instructional media and materials.

  Learning is not merely the acquisition of knowledge, and opportunities should be provided for students to develop the skills to analyse, synthesise, evaluate and to think critically, rationally and creatively. Teaching techniques such as role play which enables students to analyse issues and problems, or case studies which enables students to collect, process, analyse and synthesise data should be incorporated into the classroom process.

- **Student grouping** Teachers are expected to use small group, pairs and individualised teaching in addition to whole class teaching. The use of small groups, particularly at the primary level, is intended to provide students with the opportunity to learn according to their abilities and aptitudes and at their own pace. Two types of grouping are recommended, the homogeneous and the mixed-ability, but membership in a group is not to be permanent. The homogeneous grouping is considered suitable for teaching the basic skills where the teacher can grade activities according to the ability of the group. The mixed-ability grouping is recommended for the other subjects or when students have already acquired the basic skills. With this type of grouping the teacher is expected to encourage the brighter students to help the weaker ones, fostering more healthy social and emotional attitudes towards their peers.

- **Classroom organisation** The teacher has to ensure that classroom organisation is flexible. The physical space and arrangement of a classroom should encourage interaction between the teacher and students, between students, and between students and the instructional

materials. Desks should be arranged to facilitate learning in small groups. Such an arrangement also allows for space to become available for the display of materials or students' work, a reading corner, or an activity corner.

- **Student evaluation** The evaluation system should be continuous, formative, and diagnostic. Using information from the evaluation, teachers can identify areas of strengths and weaknesses of students and thereby plan appropriate teaching-learning strategies including remedial and enrichment activities. Detailed records for each student should be maintained for purposes of follow-up activities.

- **The role of the teacher** The teaching and learning strategy embodied in the new curriculum should lead to a more supportive learning environment. The role of the teacher changes accordingly, from being the provider of knowledge to being a facilitator of students' learning. The teacher utilises his or her creativity to plan and manage the teaching and learning activities and to give proper attention to each student. He or she adapts and prepares materials according to the students' abilities and backgrounds so that each lesson is interesting, meaningful and effective.

3.1.3 Implementation

The extent to which the new teaching and learning strategy is being put into practice varies from school to school and from classroom to classroom. Observable changes include physical reorganisation and utilisation of space. The neat rows of desks and chairs which prevailed prior to the introduction of the new curriculum have virtually disappeared. In almost all classrooms there exists the reading corner and in some classrooms, where space permits, there are also other study/activity corners. A much greater variety and quantity of teaching and learning materials, particularly for the lower grades is also evident.

Whilst the physical environment in the classroom has greatly improved and the variety and quantity of teaching aids increased, teaching styles, on the whole, have not changed as dramatically. Class teaching is by far the more common form of teacher-student interaction despite the fact that classes are physically arranged in groups. There is an appreciable increase in student interactions brought about by the seating arrangements and the greater freedom allowed to the students to talk and move about while doing their work. But the quality of interaction as a means of providing students with the opportunity to express ideas or to encourage them to think could be further enhanced.

On the whole there is a marked increase in teacher awareness of the differences in students' abilities with attempts to provide remedial and enrichment activities where necessary. But such remedial activities are in actual fact reteaching and the usual form of enrichment activities are either additional exercises of the same kind or individual reading.

With regard to continuous school-based assessment, whilst this is accepted by teachers, many do not fully understand the concept and lack the know-how in developing test items. Moreover, schools still place a lot of emphasis on academic excellence as reflected in the key public examination, the Achievement Test for Primary Schools. Although this is not detrimental in itself, it will be if it is attained at the cost of neglecting the overall development of individual students. Many also feel that there are too many records to be filled in, leaving them very little time for other tasks. Constraints like large class size and limited time are also seen as obstacles to effective evaluation.

3.1.4 Discussion

The state of affairs described above is not unexpected. Changing the physical classroom set-up and preparing and utilising simple teaching aids is relatively easy, but bringing about a change in teaching style is less easy to accomplish. Teachers need to understand the ideas underlying the new strategies, in particular the conceptual basis of the student-centered approach, and they have to unlearn established practices and develop new skills. For the new curriculum, the teacher, in his or her new role has to devise individualised, group or class work, adopt a guiding and stimulating role rather than a purely didactic one, and divide attention among the many students in the classroom. These are tasks that require not only dedication and commitment but also practice and experience and support. Moreover, in some cases, the large class size, a wide range of students' abilities and the limited time available have also made it difficult for teachers to put into practice some of the recommendations of the curriculum.

3.2 Materials Development

3.2.1 Key characteristics

A variety of teaching and learning materials have been produced, particularly for the primary curriculum. The development of the materials has been undertaken at various levels as follows:

- Central level - development being the responsibility of a Division of the Ministry of Education with participation from other Divisions and agencies.
- Intermediate level - development being initiated by the State Education Department, State Resource Centre, District Education Office, the school zone or the school cluster with the work usually done by the teachers.
- School level - development undertaken by the individual teacher or groups of teachers, formally or informally organised.

An important feature of the new curriculum is the emphasis given to the need for materials to be developed at the intermediate level. This is in line with the more general

move to encourage greater participation of agencies at this level in the educational change process. Emphasis is also given to teachers producing their own materials partly to reduce dependence on the textbook and partly to encourage them to be innovative and to provide students with a variety of materials suited to their abilities, interests and experiences.

The teachers' materials developed at the central level are distributed free to teachers during the pre-implementation in-service courses. Those developed at the intermediate level are also given free to teachers. Textbooks are made available to students through the Textbook Loan Scheme, the readers are supplied to schools by the Ministry and the study kits are paid for from a special fund.

The production of materials specially geared to NPSC has been taken up most enthusiastically by commercial firms. These materials are usually the workbook, study kit and readers.

The curriculum materials and the levels at which they have been developed are summarised in the Table I below, and a few brief comments on each follow in the next sub-section.

Table 1: Materials development at different levels of the education system

Materials	Central Level	Intermediate Level	School Level
■ General information about the curriculum; subject syllabus and syllabus specifications	✓	-	-
■ Teachers' guide books and resource books	✓	✓	-
■ Textbooks and readers	✓	-	-
■ Study kits; radio and TV programmes	✓	-	-
■ Other materials: workbook/worksheets; teaching aids; test items; examples; lesson plans; handbooks on specific areas etc.	✓	✓	✓
■ Training Materials	✓	✓	

3.2.2 The materials development process

(i) General information about the curriculum and the syllabus

The documentation of information pertaining to the new curriculum as a whole is the task of the Curriculum Development Centre. The documents contain the rationale, aims, objectives of the new curriculum, areas of study, time allocation, teaching and learning strategies and other emphases that have been introduced.

The Curriculum Development Centre provides the steering with regards to syllabus preparation and the quality control of curriculum specifications. The Centre often holds workshops to enable the participation of representatives from the relevant Divisions in the Ministry, the universities, teacher training colleges, headteachers, teachers, state education departments and professional bodies, in the preparation of the syllabus. Reviews of the syllabus also involve getting the opinions and feedback from other teachers in various parts of the country and the professional bodies (where applicable).

The subject syllabus forms the basis of learning in the classroom. Its preparation is undertaken with extreme care to ensure that the aims, objectives and content are in line with national needs and aspirations as well as educational and pedagogical principles. Specifications of each NPSC syllabus is contained in the teachers' guidebook for the subject. As for the ISSC programme, a separate document for each subject has been produced. These specifications contain the scope and sequence of the knowledge to be acquired, the skills to be developed and the values to be inculcated. The Centre undertakes the quality control of the subject syllabus and syllabus specifications.

(ii) Teachers' guide books and resource books

Teachers' guide books have been produced for each subject in the primary curriculum and selected subjects in the lower secondary level and for specific areas such as student evaluation. The guide books ccntain statements on the approach, techniques for teaching, and examples of teaching and learning activities. Resource books are produced only for selected subjects or areas and aim to provide additional assistance to teachers. For example, the resource book for Bahasa Malaysia in NPSC contains examples of teaching-learning activities and materials. The preparation of the guide books and resource books is the responsibility of the Curriculum Development Centre. The agencies at the intermediate level also undertake to produce guide books and resource books to supplement those produced at the central level. Such work is usually done by teachers during weekends and school holidays.

(iii) Textbooks and readers

With the advent of the new curricula it was hoped to reduce

dependence on the textbook - nonetheless it is still a very important teaching and learning resource and great efforts have been taken to ensure that the textbooks produced are of high quality. Textbooks have to be prepared for the new curricula at primary and lower secondary levels. Overall responsibility for this lies with the Textbook Division of the Ministry of Education. Some of these books have been published by the Dewan Bahasa dan Pustaka, a quasi-government publishing house, and others by commercial publishers.

Prior to any writing, the publishers are briefed on professional matters, such as appropriate language and vocabulary by the Curriculum Development Centre, and on technical specifications by the Textbook Division. When the manuscripts are ready, they are evaluated by a panel comprising selected teachers, curriculum officers and officers of the Textbook Division. On the basis of the evaluation reports, the Division then decides whether to approve or reject each book. The selected books are then included in the Ministry's list of textbooks from which schools may make their selection. Through the Textbook Loan scheme, virtually all students possess the necessary textbooks.

NPSC readers have been designated essential basic learning materials as a means to develop the pupil's interest in reading, to reinforce language acquisition, and to provide students with the opportunity to acquire knowledge. Initially, there was only a small selection of readers in Bahasa Malaysia, Chinese and Tamil on the market, and there was a clear need to initiate the production of suitable readers in all the three languages; readers in the English language were already available in sufficient numbers. The Textbook Division was entrusted with the task and the procedure adopted was similar to the production of textbooks. The readers produced were on various topics, written by various authors and published by various firms.

(iv) **Study kits, radio and TV programmes**

The study kit is an innovation in the Malaysian school system and it was necessary to work out policies and procedures for their production and supply. The fact that they comprise both printed material and concrete objects made existing financial and procurement procedures inapplicable. In the event, study kits for NPSC were produced centrally through the joint effort of the Curriculum Development Centre and the Textbook Division. Kits for Languages, Mathematics and Islamic Religious Education have been produced with the aim of providing teachers with examples of various types of teaching and learning aids and to encourage them to prepare additional materials. For instance, the materials in the kit for Year 1 Bahasa Malaysia include, the alphabet on printed cards, illustrated reading passages, and cards for matching words and pictures.

Other centrally produced teaching and learning materials included those produced for remedial and enrichment activities during the initial stages of implementing NPSC. The Educational Technology Division of the Ministry undertook

to prepare the materials. It was also responsible for the production of radio and TV programmes for schools. With the introduction of the new curricula, new programmes have been produced, particularly on special areas of concern or to reflect the new emphasis being introduced.

(v) **Other materials**

The preparation of workbook/worksheets is an attempt to ensure that students are provided with an adequate amount of pupil materials. For the primary level especially, this is necessary to help reinforce the acquisition of the concepts and skills being learned. These are prepared at all three levels, as are various other teaching aids. For example, aids are often prepared during in-service training courses at central level, and additional materials are continually produced to meet specific needs. Examples include a series of handbooks on the various teaching and learning activities for Bahasa Malaysia and a compendium for English at the lower secondary. The materials produced at the intermediate and school levels are of various types depending on the needs of the locale or school.

(vi) **Training materials**

During training courses for in-service teachers, many of the materials described above are used or referred to. In addition the Curriculum Development Centre, which is responsible for the training of key personnel and the teacher trainers, produces other materials in order to provide additional clarification, details and examples. Such materials, include printed matter, audio and video tapes and other teaching aids. These materials, particularly the printed materials and tapes, are then duplicated for use at the state, district or local levels. At the same time, many states also undertake to prepare additional materials in order to ensure local relevance.

3.2.3 **Implementation and discussion**

The production of materials at the various levels and by commercial firms has certainly led to an increase in variety and quantity. This is an improvement. However, for the curriculum to be effectively implemented, the materials have to be of high quality and meet the needs of teachers and students. The materials also have to be available in adequate numbers and at the appropriate times. There are still concerns regarding quality, relevance and availability that need to be looked into.

Materials produced at the central level provide the basic guidelines for teaching and learning and it is crucial that these materials are produced on time to meet implementation schedules. The experience of the new primary and lower secondary curricula development process was that there was continual pressure to get materials ready on time. With the need to ensure consistency, complementarity and the minimum of overlaps between the different materials, the cycles of preparing drafts, reviews and amendments was time consuming.

With regards to utilisation, it is evident that in the primary level classes, teachers on the whole, rely heavily on the guide books or resource books. Whilst it is encouraging to note that teachers follow the suggestions in the books, indicating a willingness to implement the new curriculum, such rigid adherence to the guides means that nothing is modified to meet the needs of particular students and classroom conditions. There is therefore a strong argument for agencies at the intermediate and school levels to adapt certain portions of the centrally produced materials and to produce additional ones that are more suited to the particular characteristics of the locale or school. In fact since the implementation of the new primary curriculum there have been an increasing number of such initiatives by the agencies at the intermediate level. However, it is not possible for agencies at the central and intermediate levels to provide teachers with all the examples and ideas that they need for their day-to-day work. Neither should this be necessary, for teachers should be supported and provided with the opportunities to plan their own teaching and develop materials to meet the particular needs, interests and abilities of students.

One of the strengths of the curriculum innovations is the variety and quantity of learning aids for students. But the continuing availability of these aids will depend on financial support. Whilst a special fund was available for the first cycle of implementation, with no more financial assistance and the high rate of wear and tear, it will be extremely difficult to maintain the same level of abundance. The extent to which the curriculum innovation can be effectively implemented and sustained must therefore be brought into question.

3.3 Teacher Preparation and Support

3.3.1 Key characteristics

The success and failure of a curriculum innovation is dependent on the teachers who are directly involved in its implementation. The innovative features of NPSC, such as small group and individual teaching, involve changes in the role of teachers from the more traditional dispenser of information and disciplinarian, to a manager of time and resources and a facilitator of learning. Clearly both serving teachers and teachers in training, needed to be prepared for this new role.

Preparation of serving teachers to implement NPSC was done through the 'key personnel' system, or the 'cascading' approach. A team of selected teachers, termed key personnel teachers, were given training centrally. Each team from the fourteen states was composed of a representative for each subject in NPSC. These key personnel were then expected to train other classroom teachers in matters of content, teaching-learning strategies, evaluation procedures, and pupil materials. In addition to the training sessions conducted for classroom teachers, each teacher was provided with guidebooks containing suggestions for the curriculum specification, teaching-learning strategies, and pupil

materials.

In view of the difficulties faced by teachers in implementing NPSC, some of which will be discussed shortly, the key personnel approach to teacher preparation was reviewed. As a result, for ISSC, whilst the preparation of teachers follows the key personnel model in part, an added feature is the emphasis given to in-house training of classroom teachers. Thus in this new system, the preparation of classroom teachers is the responsibility of the school. The teachers are given the task of planning and conducting the training. In doing so, they can call upon trained key personnel to assist them conduct sessions for their teachers.

In addition to the normal delivery system of lectures, discussions and demonstrations, each headteacher has at his/or her disposal a set of video cassettes containing sample lessons of each subject area. In training sessions, the discussion can then focus on actual lessons, thus bridging the gap between the theory as explained by the developers of the curriculum programme and key personnel, and the actual practices in the classrooms.

This system of in-service teacher training was implemented for ISSC in 1990, and NPSC is also now getting the support of heads in teacher preparation.

Attention was also given to the preparation of new teachers. A supply of teachers who would be able to continue the implementation of the curriculum is vital to the success of the innovation. Pre-service teacher training programmes are conducted by the 28 training colleges under the jurisdiction of the Ministry of Education, and steps were taken to ensure that teacher trainees were informed and trained about the changes and equipped with suitable knowledge and skills to ensure the continuity of implementation. Thus the training curriculum was revised to include the innovative elements of both NPSC and ISSC. Teacher trainers were themselves given short courses to acquaint them with the curricula. Since 1988, selected teacher trainers have followed a full-time 3-month primary school attachment programme. This active involvement and participation in day-to-day school activities, has helped to strengthen and update their knowledge and skills about the school culture.

In addition to pre-service and in-service training, teachers needed support, particularly during the early phase of implementation. They needed to know that there would be someone to whom they could turn for opinions and suggestions. This could be their headteacher or it could be performed by their peers, either at the school or district level. The establishment of school clusters, to be discussed later, provided a valuable support system at that time.

3.3.2 Implementation and discussion

The key characteristics of the teacher preparation and support system have been outlined above. The extent to which these enabled teachers to implement the curriculum more effectively is difficult to assess. But a few issues emerge

which can be discussed. Taking first the in-service teacher preparation strategy, whilst on paper, this system should work, in practice it is more complicated. When the key personnel were centrally trained, each attended sessions only for their particular subject, totalling about 36 hours. However at the state, district or local level, this situation could not be duplicated because of time constraints. Thus a primary school teacher being a general purpose teacher, teaches at least four subjects - including Bahasa Malaysia, Mathematics, Physical Education and Art Education and the course of 36 hours had to be divided between these. As a result, the time available for each subject had to be drastically reduced.

Another matter of concern with regards to the key personnel system of teacher preparation is the status of the teachers who became key personnel. These key personnel were selected from teachers who were judged to be 'good teachers', but it was essentially an informal position with no additional privileges. Some of them were brought to work in the State or District Education Offices and called upon to conduct courses at this level, while some remained as classroom teachers in the schools with professional authority but no line authority with regards to peers. There was thus some conflict of status and standing. Moreover, the responsibilities to conduct courses for their peers, or in some cases more senior teachers, required additional preparation time and effort. But the service regulations were such that the key personnel would not be able to claim for the added professional load carried and this resulted in some dissatisfaction.

These difficulties are to some extent alleviated in the new system of in-house training adopted in the ISCC programme. When a school or clusters of schools invite key personnel to conduct courses, they are provided with some allowances depending on the number of hours of lectures given. This in-house system of teacher preparation is still in its early stage of implementation, and it is too soon to judge its impact. But it does appear to have an edge over the key personnel system used for the implementation of NPSC. However the conflict regarding the status of the key personnel has yet to be fully worked out.

Preparing teachers for a new role associated with a curriculum innovation involves more than training. The efficiency with which teachers implement the curriculum is dependent on their attitudes towards the innovation. An innovation like NPSC requires that teachers spend more time and effort in planning and preparing for each lesson. Teachers who have accepted the innovation therefore need support to help them sustain their positive acceptance of the programme. The various functions of consultation, advice and support, could be performed by the headteachers and the supervisors or inspectors.

In fact one issue which teachers have indicated was vital was support from the management. As noted earlier, in the early phase of NPSC, attention was focussed on training classroom teachers, and the headmaster was not brought into the

training programme early enough to be informed about the innovative features of NPSC. As a result, school heads, in most cases, were not able to provide the support and advice which teachers needed during implementation. Moreover, there were administrative complications. For example, NPSC required a different allocation of time for its classes. During the transition period, when some classes were implementing NPSC and some others were still following the old curriculum, classroom teachers sometimes faced problems in getting the necessary block timetabling. Teachers also required a constant supply of paper and writing materials to produce additional pupil materials. This involved additional expenses and administrative procedures. The next section examines the management of curriculum implementation further.

3.4 School Management Strategies

3.4.1 Key characteristics

This section will consider effective school management strategies, focussing on the innovative management activities related to the demands of the new curriculum. These innovations include those activities initiated and organised at the school level or jointly carried out in conjunction with the State or District Education Departments. The activities identified are mainly directed towards ensuring local relevance, the distribution and sharing of facilities and expertise, and the improvement of standards. They are also concerned with the encouragement of initiatives as well as provision for a certain amount of self-sufficiency through cooperation.

The strategies can be categorised into three broad areas namely:

- institutionalising the changes within the management structure,
- the management of teaching learning needs in the classroom, and
- fostering effective linkages between school and community.

(i) Management structures

The new curricula place additional responsibilities on the educational agencies at state and district levels requiring some changes in their organisational structure. Though the main organisational structures remain very much centralised, measures for decentralised decision-making and policy clarification were seen as crucial. A new unit handling curriculum matters was therefore established in all the 14 State Education Departments. A second Deputy Director was installed to oversee the professional components of the department, and a special officer was appointed to coordinate all primary curriculum matters with the central agency. The State Education Department as a whole is responsible for establishing guidelines and strategies for implementation, setting goals and standards of education, monitoring and

coordinating efforts and the setting up of support programmes and special projects.

Curriculum management responsibility has been further extended to every district in the country through the creation of totally new District Education Departments. Altogether 124 new departments have been established each equipped with the necessary personnel and facilities. Their responsibilities are mainly directed towards operationalising policies which includes: further interpretation and execution of the curriculum, supervision, staff development and other forms of support to schools under their jurisdiction. It is hoped that through the closer links to the school and immediate community, problems can be identified and dealt with at source.

There is inevitably considerable variation in standards in the schools due to wide disparities in facilities, management expertise, public support and other factors. To help alleviate this, some District Education Departments in the country promote the school cluster concept to enable the development of instruments for school-based evaluation and locally relevant curriculum materials. Subject committees are set up with members chosen from the more able subject teachers from amongst a number of closely located schools. Each committee is chaired by a principal of a member school. Each principal in the cluster is responsible for at least one curriculum area. Whoever heads the committee, his or her school becomes the secretariat for that particular subject area. Some school clusters also practice the exchange of teachers for invigilation duties during examination sessions to ensure consistency and accountability. For this purpose examination schedules and marking systems are coordinated and moderated amongst schools.

Under the new lower secondary programme the school cluster concept provides support for teacher in-service training. Thus those schools that are unable to provide subject and management expertise, can draw on that available within the cluster. For example, leadership can be provided through an able headteacher chosen from a member school. Besides the obvious advantage of wider interactions and sharing of expertise amongst teachers, it enables the maximum utilisation of able leadership at local level.

Significant changes have also been introduced in the school system to provide the necessary grass-roots management support for curriculum innovation. Thus in order to assist headteachers in their role as the instructional leaders, the office of a second assistant head has been created, with responsibilities encompassing the effective planning, coordinating and promoting of teaching-learning activities. Curriculum committees and subject panels have been set up in schools to ensure effective participation from teachers, and to promote curriculum interpretation to suit local conditions and differentiated student learning abilities.

Other efforts towards improving school management practices include regular staff meetings, and ensuring adequate mechanisms exist for monitoring activities and providing

performance feedback amongst staff.

(ii) **Management of teaching-learning**

One key feature of the new curriculum, as noted earlier, concerns its innovative timing and scheduling requirements. Careful timetabling is necessary to prevent teaching-learning problems due to time constraints, particularly in double session schools. For example, block timetabling has been used to facilitate the effective scheduling and teaching of Physical Education at the primary level. In a number of project schools in one state, headteachers are advised to allocate the first three periods in the morning, and in the case of afternoon schools, the last three periods, for the teaching of Physical Education. Depending on the size of school and number of classes, the same teachers are assigned to teach all three consecutive periods. This practice has helped reduce the time normally required for organising the necessary equipment. It has also provided consistency of teaching and learning, and has prevented Physical Education classes from being conducted in the heat of the midday sun. An informal evaluation report on the project revealed that children respond well to the new routine and it has therefore been proposed that the
project be introduced to other schools in the state.

The new secondary programme also has potential timetabling problems and some of these have been solved through what is called the 'extended' timetable. One day a week each class in the morning session school stay back an extra four periods, whilst pupils from the afternoon session school come to school four periods earlier for the 'Living Skills' programme. Under this arrangement, teacher schedules are revised to accommodate the new requirements. However, there are problems for the pupils with the transport arrangements and the need for additional lunch allowances.

(iii) **School-community links**

In recent years, parents and community have become more sensitive to education and keen to involve themselves in the educative process of their children. As early as 1978 the Curriculum Development Centre ventured into a project which attempted to raise parents awareness of their roles in education through dialogue, and discussions with the headman and members of the community and through informal get-togethers and demonstration sessions. Having once gained a favourable response, community centres were then set up where workshops were organised to provide parents and teachers with the opportunity to meet each other and discuss common problems, as well as to develop suitable teaching-learning materials for school and home use. Efforts to involve parents in helping their children in library and reading programmes were also introduced. Initially, project officers held the major role of planning and organising such activities. However, cooperative leadership initiatives were later encouraged through a Workshop Committee, chaired by a parent with membership drawn from a cross-section of the agencies in the community.

The more common form of community involvement in school activities involves the contribution of resources, usually financial, material and manpower. Most of these are initiated and organised through Parent-Teacher Association efforts. Lately, Malaysia launched a nationwide campaign calling for further community participation in the construction of school buildings to overcome the acute shortage of classrooms in several schools. This was received favourably in many states, thus emphasising the willingness of the community to participate in worthwhile school activities.

3.4.2 Implementation and discussion

Having outlined some of the key characteristics of the management strategies related to the introduction of the new curricula, some assessment of their impact is now in order.

(i) Management structures

Institutionalising change within an existing structure has its advantages and disadvantages. On the one hand, the strategy provides a formal mechanism and the personnel to manage change and ensure its continuity over time. However its installation is tantamount to an imposition and successful implementation of change requires more than directives and procedures. The more covert factors such as conviction, acceptance, commitment and quality of personnel and leadership, as well as motivation, are not only necessary but also important prerequisites.

In the Malaysian case described here, planned change at the state level was imposed on an existing management structure that traditionally practised centralised policy decision making. The management problems encountered were mainly due to lack of effective decentralised measures where these were required. Personnel were often slow in being initiators of change or even receptive to the idea of change. Moreover, there was a shortage of the expertise needed to manage, promote and sustain decentralised practices. Where the management expertise was available, states have shown remarkably good progress and results.

The new District Education Departments also showed promise according to a study on their role and functions. District personnel were convinced that the agency link was necessary and could be effectively carried out. They were also aware of their significant professional leadership role and were generally committed to their tasks. However it was also reported that curriculum implementation was beset by difficulties stemming from the management structure adopted at this level. Personnel lacked the management experience required in their new tasks, particularly in providing effective intervention on curriculum matters during school supervision. It was much easier to focus on administrative matters such as discipline, finance and other routines. The agency also lacked the supportive infrastructure - personnel, facilities and utilities to manage the increase in administrative responsibilities.

The departments did however initiate a number of worthwhile projects, most notably, the school cluster project in Perak, described above. A necessary condition for the success of this is strong and imaginative leadership. A second important factor is recognition and support from the central agency. This is particularly true for the Malaysian case where the interest and regular supervision provided by the state and district agencies have helped maintain the continuing and active participation of member schools.

Support from member schools in the cluster is also crucial and in this case it depends on a number of related factors. Firstly members must recognise that the project is useful and serves their needs. This is further enforced when the activities proved to be effective. It would seem that success provides its own momentum. In Perak the cluster strategy is being extended to include the cooperative development of extra-curricular activities as well.

At the school level, the activities carried out within the new structure showed varying degrees of success. The setting up and conduct of curriculum committees and subject panels at the primary and secondary levels were widely practised in schools. However the quality of professional interactions that took place is very difficult to assess. For example in three schools visited in one district, teachers reported that they discussed and cooperatively planned out their teaching units, prepared materials and worked out test items and shared resource materials. However these activities were only active during the early part of the year and the bulk of the curriculum planning responsibility was relegated to the senior subject teacher.

As regards curriculum supervision activities, observations in primary schools have shown that these were shared amongst the senior teachers with very little participation from headteachers. It would seem that although orientation to the new programme was given to heads, it was administratively biased. It was assumed that they had the initiative and ability to manage the new programme whereas in reality this was not the case. In contrast, for the new secondary programme, more curriculum perspectives have been included in the orientation of headteachers.

(ii) **Management of teaching-learning**

The block-timetabling strategy introduced in the state of Irengganu, has, as noted earlier, been successful, and one factor contributing towards this has been the availability of consistent supervision and monitoring. However, at the secondary level, timetabling has become a more complex exercise than previously. New subject requirements, coupled with limited facilities and time in double session schools, require schools to plan new arrangements. Whilst the central agency has suggested extended timetabling for the 'Living Skills' subject, its implementation has been left to schools to sort out. There was some initial resistance to the innovative approach suggested, but schools have come up with two alternative models that seem to be workable within the constraints of existing workshop facilities.

(iii) School-community links

An examination of the community-based project described earlier, reveals that the success of community participation in school activities depends a great deal on the support and leadership of the village headman. The project also suggests that the early community involvement of existing agencies, such as the Rural Development Agencies, is also crucial since it provides the necessary support base and communication network for dissemination. Such agencies need to be represented at the planning stage itself as well as throughout the duration of the implementation period.

However, whilst it is generally fairly easy to encourage community participation in the provision of resources for schools, it has been more difficult to involve parents and the community in the educative process itself, especially amongst rural communities. It would seem that the present generation of parents need to be made more aware of their role in the education of the children. This can be initially through a number of informal activities of interest to them, followed up by a strategy involving workshops with shared leadership between school authorities and parents.

On the whole it was generally felt that parents' involvement in the education of their children should start at the pre-school level. To a certain extent this is already taking place through the early childhood education centres which have been set up in rural communities by the Ministry of Rural Development. Although such centres are quite formal and structured, opportunities for parents to be involved in the education of their children is provided through get-togethers and home visits.

4.0 CONCLUSIONS

The curriculum innovations in Malaysia represent a significant attempt to bring about improvements in the quality of education in the country. It is not intended to make any assessment here as to the overall success of these reforms or comment on their contribution to educational development. The material on which this case study is based is insufficient and in any event it is probably too early to draw firm conclusions. However, based on the discussions in the previous sections, some findings and recommendations are presented below. These are not particularly novel in themselves, but rather, they re-inforce many of the findings presented in the discussions of curriculum innovation in predominantly industrialised countries.

- Curriculum innovation is undoubtedly complex and to expect total success is unrealistic. The implementation strategy adopted should take note of existing strengths and weaknesses in the education system.

- Curriculum implementation often requires people to take on new roles and responsibilities and to undertake tasks in different ways. Continuous efforts are needed

to provide support and reinforcement for implementation. This takes time and money. The Malaysian curriculum changes required the teacher to become a facilitator of learning, and involved changes in classroom organisation. Given the prevailing constraints of large classes, a shortage of resources and time-tabling problems, teachers required imagination, creativity, flexibility, initiative and confidence to implement the curricula. Managers should recognise these factors and make allowances in their management strategies.

- Implementation of curricula programmes from one level to the next, requires continuity, consistency and complementarity. This highlights the importance of clear policy guidelines being set out at the planning stage and the institution of good management practices such as co-ordination, consultation and monitoring.

- The preparation of teachers for implementing change through quality in-service and pre-service training is essential. Steps should also be taken to ensure that those at other levels have the necessary expertise to make effective interventions.

- Implementation requires effective leadership and management and more participatory processes may be appropriate. Professional competencies may need to be improved through proper orientation and training.

- Teacher involvement in change decisions can help promote more effective implementation. Strategies which encourage teachers to feel a sense of ownership regarding the innovation should be actively promoted.

- The financial implications of curriculum development, implementation and institutionalisation need to be carefully considered. Adequate funding is necessary for on-going training, the continuous supply of materials and essential physical facilities. The community can play a role in such resourcing.

- More concerted efforts should be made to involve the community in the total education process, particularly in rural communities where learning assistance is scarce. A number of community-school projects exist in Malaysia and wider dissemination of information concerning them within the country is recommended.

In sum, as this case study has highlighted, implementing curriculum innovations is highly complex involving as it does a number of interrelated dimensions including changes in materials, teachers roles' and management practices. Implementation in a system sparks off a chain of events, both intended and unintended and all need to be understood to help ensure effective management of change. In the case of the Malaysian curriculum innovations, some of the issues and problems associated with implementation have been attended to, some others require further consideration and may necessitate policy changes and revised planning, yet others may prove difficult to solve. However, acknowledging their

existence and working within the prevailing constraints where necessary, is an important step towards helping to ensure that curriculum innovation does contribute towards bringing about improvement in the quality of education in the country.

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